2:Newcomb E-4, 5 (1951-1952) 1956
NM7 Delaware NM7

from archaeological sites attributed to the Delawares. Copper tobacco pipes were recorded early in the seventeenth century by Juet who said: "They had red Copper Tabacco pipes, and other things of Copper they did weare about their neckes."[167] Lindestrom described the pipes as painted and said that there were some "an ell in length, which are screwed together with leather, to lean on. . .and in these pipe-heads will go a handful of tobacco."[168] In another place he indicated that pipe heads were decorated with birds and animals "very beautifully painted and glazed."[169] Holm said that the pipes were "a fathom long, which they lean upon as a stick."[170] The pottery pipes found in archaeological sites were plainer, being "straight conical tubes, plain or stamped, to elbow-shaped forms decorated with incised or stamped lines."[171] De Laet said they had ". . .tubes for smoking tobacco formed. . .of flint stone ingeniously perforated."[172] Stone pipes, however, are relatively rare in archaeological sites.[173]

Agricultural implements of the women were simple; short-handled hoes were fashioned with a blade of dogwood, stone, tortoise shell, or the scapula of a deer (later bison).[174] The scapula hoe is remembered by living Delawares. The Delawares had pottery vessels, and according to archaeological information the paste varied from fine to medium coarse, grit temper was more common than shell temper, and sherds are usually gray or brown. Vessels had "conical and rounded bottoms" and were "straight walled or rounded." Shoulders were often absent, although some had pronounced shoulders when associated with a collared rim. Decoration, if present, was by roughening with a cord-wrapped paddle. Incised decorative designs were frequent.[175] Containers and other utensils were fashioned of wood, shell, bark, gourds, and tortoise shell.[176] Stone tools are common in archaeological deposits and include "plain or pitted hammerstones, anvil stones, abrading stones, sinew stones, pestles, shallow mortars, choppers (or hoes), picks, netsinkers, paint stones and amorphous pieces of mica."[177] They possessed "stone hatchets" that were hafted to a handle, and another type which was neither grooved nor hafted.[178] The women and old men manufactured the mats, ropes, tump lines, and baskets, which were made from wild hemp, nettle, silkweed, spruce roots, cornhusks, ash splints, papaw bark, elm bast, and rushes. Wooden bowls, dishes, and mortars were made of maple, buckeye, and elm wood.[179] Speck has described fully the block

[167]Juet, 1909, pp. 18-19; De Laet, 1909, p. 49.
[168]Lindestrom, 1925, p. 197.
[169]*Ibid.*, p. 221.
[170]Holm, 1834, p. 130.
[171]Smith, 1950, p. 119.
[172]De Laet, 1909, p. 57.
[173]Butler, 1947, p. 252.
[174]Johnson, 1917, p. 279; Jemison, 1918, p. 47; Zeisberger, 1910, p. 28; Mähr, 1954, pp. 385-86.
[175]Smith, 1950, pp. 117-18.
[176]Pastorius, 1912, p. 384; Lindestrom, 1925, p. 255; Johnson, 1917, p. 281; Speck, 1941, pp. 47, 76-79; Smith, 1950, p. 119.
[177]Smith, 1950, p. 119.
[178]Kalm, 1937, I: 229.
[179]Thomas, 1912, p. 341; Lindestrom, 1925, p. 221; De Laet, 1909, p. 57; Harrington, 1913, p. 224.

3:Zeisberger M-5 (1767-1780)1910
NM7 Delaware NM7

their huts. Trees were killed wherever they wished to have space for planting. 412

For the chase they used bow and arrow, both made of wood, the point of the arrow alone being of flint in the shape of a lengthened triangle, sharp and pointed, securely tied to the shaft. 224

Kettles and pots for cooking they made of clay mixed with sea shells, pounded very fine. After the pot had been shaped it was burned hard in fire. All these things, knives, hatchets, arrows and large pieces of the pottery they used at one time, are frequently found in places where Indians have lived. Potsherds have become black through and through so that the shell pieces may be seen. 323

They could shoot game as well in those days as at the present time with their rifled guns. They declare that game was not as shy then as now by reason of the report of the guns. In those days they killed only as much of game as was needed for sustenance, skins being used for clothing both men and women; hence, game was more abundant at that time. The women made blankets of turkey-feathers which were bound together with twine made of wild hemp. Of such many are to be found even at the present day among the Indians, and these in winter are a better protection against the cold than the best European blanket. The women also made themselves petticoats of wild hemp. 224 291 [237]

Bow and arrow have fallen into disuse among those Indians that trade with whites; are, indeed, only used for small game, such as the pigeon, fox and raccoon, in order to save powder. There are, however, whole tribes to the west and northwest that use nothing but bow and arrow in the chase and that have no European weapons, that are not even anxious to obtain them; for, say they, if we discard bow and arrow, who will then make for us enough of powder and shot. They prefer, therefore, to hold to their old custom and usage. 224

The fire materials of those days consisted of a dry piece of wood or board and a round dry stick. The latter was placed upon the board and turned or twirled with great swiftness, both hands being used, until there was smoke and fire. This, however, was done only in case their fire had gone out, which they 372

Food Preservation and Cooking

Passing to the problem of food preservation, we find that such crops as maize, tobacco and meat were most commonly stored in pits covered over first with bark or grass and then with earth (Lindstrom, p. 253; Johnson, p. 279; Krieger, p. 39; De Rasieres, p. 107). The house was also an important storage place, the food being placed in hemp bags and suspended from the ceiling (Johnson, p. 279; Harrington, 1913, p. 218; Heckewelder, 1820, p. 370). 251

Maize was used in a variety of ways. According to one author, those stalks that produced no ears were pulled early and the sap sucked from them (De Rasieres, p.107). The ears were either roasted in ashes or boiled. Most of the maize, however, seems to have been pounded or ground into flour and sifted through a basket of the desired coarseness. The finer flour was mixed with lukewarm water, kneaded into dough and made into round, flat little cakes which were baked in hot ashes. The coarser flour was made into porridge (i.e. boiled with water) to which nuts, beans, berries, pumpkin or meat were sometimes added (Penn, pp. 31-32; Lindstrom, p. 254; De Rasieres, p. 107; Danckhaerts, p. 159; Johnson, p. 281; Heckewelder, 1781, pp. 194-96; Loskiel, p. 67). Indeed, there seems to have been almost endless variety in the preparation of these cornflour dishes. 252

The other vegetables were most commonly eaten boiled and, it should be noted, without seasoning except ashes, as the Delaware did not use salt (Pastorius, 1700, p. 384; Danckaerts, p. 159; Heckewelder, 1881, p. 194; Lindstrom, p. 254). Water was probably the most important beverage known to the Delaware at this time, but fruit juices and water flavored with crushed walnuts or hickory nuts are reported (Johnson, p. 281; Loskiel, p. 74; Kalm, p. 269). Tobacco was always mixed with willow bark or sumac for smoking (Loskiel, p. 73; Speck, 1931, p. 127). [263] 272 276

Manufactures

A wide variety of materials was utilized for cooking equipment. Serving dishes were made of wood, bark, shell, or a cut-off calabash; spoons were of wood or suitably shaped shells. Cups of tortoise shell have also been found (Johnson, p. 281; Harrington, 1913, p. 223; Danckaerts, p. 159; Lindstrom, p. 255; Pastorius, 1700, p. 384; Skinner, 1915, p. 38). Pottery, which was used for boiling, is found abundantly in Lenape territory. It was made of clay mixed with pounded sea shells, mica or sand and various combinations of these ingredients. The technique used was coiling. Designs consisted of lines and dots, stamped or incised on the vessel. Broken or cracked pieces were mended by lacing through holes bored on either side of the defect (Skinner, 1915, pp. 12 and 13; Heye, pp. 62-66; Abbott, 1875, p. 345; Smith, p. 138; Zeisberger, 1910, p. 29). 415 323

252
262 Flour was either ground between two stones or pounded in a
[412] mortar and pestle by the Delaware. The mortar was usually a hollowed tree trunk, the pestle a suitably shaped stone (Smith, p. 138; Lindstrom, pp. 253-54; Abbott, 1875, p. 357; Kalm, p. 230).

276 Stone pottery and clay pipes have been uncovered on archae-
[323] ological sites. Lindstrom describes the Lenape pipes as beautifully
324 painted and glazed with birds and animals on the head. He says there are some "...an ell in length, which are screwed together with leather,...and in these pipe-heads will go a handful of tobacco" (Lindstrom, p. 197). These were presumably of European manufacture. The pipes which have been recovered from old sites are of a much humbler variety (Abbott, 1875, pp. 343-44; Skinner, 1909, p. 27; Butler, p. 249). This apparent inconsistency can be readily explained, however, by assuming that Lindstrom was referring to the calumets or peace pipes, which were relatively rare and would be likely to have been carried west by the owners when they moved (Kalm, pp. 231-32).

285 Some household items manufactured by the Delaware women were
[283] mats, ropes and baskets made from wild hemp, spruce roots, corn husks and rushes. The mats, which were sometimes painted or had figures worked in or over the weave, were hung on the walls for increased protection against the elements as well as to beautify the house (Smith, p. 138; Lindstrom, p. 221; Harrington, 1913, p. 224). They were also used as part of the bedding together with the skin or
287 turkey-feather robes which served as clothing during the day (Johnson, p. 280; Heckewelder, 1881, p. 203). The turkey-feather robes deserve special attention as they were evidently one of the most distinctive and beautiful of the Delaware's manufactures. Lindstrom says: "They also make fine and beautiful quilts of painted bird feathers. In the first place they tie them with meshes like nets, yet very fine; then they fasten the feathers in the meshes, so neat and strong that not one feather can come loose from it..." (Lindstrom, pp. 221-22). When there was a "bed," it consisted of a wooden
352 shelf running around the interior wall of the house and serving as a seat by day (Harrington, 1913, p. 218; Zeisberger, 1910, p. 17; Skinner, 1915, p. 7).

342 The most common type of Delaware house was a small hut consisting of a rectangular, gabled frame of saplings covered with bark or mats. Penn describes their houses thus: "Their Houses are Mats, or Bark of Trees set on Poles, in the fashion of an English Barn, but out of the power of the Winds, for they are hardly higher than a Man..." (Penn, p. 31). Some Delaware, however, constructed a house large enough to accommodate several families, the increase in size all deriving from greater length. The result was not unlike an Iroquois longhouse.[6] In the center of the house was one or more fires depending on the length of the building, and the ridge of the roof was arranged with an opening through which the smoke could

[P.10, B]

121 zon in order that Minsi material may be separated from artifacts pertaining to earlier occupations. The writer herewith presents what he considers to be a reasonably valid list of elements pertaining to Minsi material culture. This list cannot in the light of our present knowledge pretend to anything approaching final inclusiveness or conclusiveness. It is the 1951 model and all rights to make subsequent changes are reserved.

127 In this list I have, of course, leaned heavily upon Ritchie's Bell-Philhower report as well as my own researches both prior to and following the Bell-Philhower "dig". I would also like to acknowledge much valuable assistance derived from access to the splendid collection of material from Minisink Island in the collection of Mr. Rudolph Ludwig, Milford, Pa.

Ceramics

Pipes

172 So far as the writer has been able to
276 determine, no stone pipes attributable to
323 the Minsi have been found in the upper Delaware area or elsewhere. Pipes of pottery occur, but are not numerous. These pottery pipes may be tubular, effigy, or obtuse—angle elbow. (Plate 1, No. 2).
[531] Decoration may consist of pointillé, incised lines, corded stick impressions, or may be absent. (Plate 1, Nos. 1 and 3, shows pointillé-decorated pipe sherds.)

Vessels

172 Pottery may be of various Owasco types
415 (Castle Creek Epigonus is rather promi
323 nent) with punctuate, corded, platted, and beaded designs of several forms, or of Iroquoian types with incised designs in herringbone and other patterns. Rims often exhibit castellations. (See Plate 2. The sherds in the top row and the sherd at the left in the bottom row exhibit Owasco features. The remainder are primarily Iroquoian in motif.) An excellent description

[P. 1, A]

An excellent description

172 of Owasco ceramics is contained in Ritchie's
323 "Pre-Iroquoian Occupations of New York
415 State". A reading of this should precede
[114] any serious approach to the study of what we presently believe to be Minsi pottery.

The bodies of Minsi vessels ordinarily are corded in some fashion. Ritchie assigns the greatest frequency to a finely corded body treatment with smoothed-over cord second, smooth third, and coarsely corded fourth. It is to be noted that other body techniques occur on occasion such as corded stick imprinted and brushed-over cord.

Miniature vessels occur in this culture. The writer has never seen any from the Milford area which were not crude, including one, partially complete, excavated by him from the Bell-Philhower Site late in 1947. (Plate 3).

It may be remarked in connection with this all too brief description of 'Minsi' pottery vessels that one of the stumbling blocks in the path of a final and conclusive acceptance of the Owasco-cum-Iroquois explanation of the ultimate Minsi Culture is the fact that to the best of my knowledge no sherd or vessel has yet been found on a presumed Minsi site embodying an indeniable combination of pronounced Owasco and Iroquoian decorative techniques. This statement is made with full awareness, however, that the so-called Castle Creek Epigonus pottery may represent a combination of decorative motifs.

Pottery Effigies

172 In the light of the finding by the writer
323 of the pottery effigy of an animal head on
532 the Bell site in 1949, there can be little doubt that objects of this type must be included in the material culture of the Minsi.

The object in question (Plate 4, Nos. 1 and 2) is complete with the exception of the ears and a small part of the lower por-

[P. 11, B]

172 tion of the face. The hole in the dorsal
●323 surface (shown in Plate 4, No. 2) is con-
532 nected with the holes indicating the eyes. No explanation for the purpose of this dorsal hole or indeed of the entire specimen can be attempted at this time.

Bone

172 Bone and antler artifacts do not appear
321 to be abundant on Minsi sites. On occa-
41 sion, the bone awl, antler flakers of cylindrical form, combs, turtle-shell cups, perforated deer phalanges, perforated needles, antler picks, beaming tools, and short bone tubes, probably used as ornaments, are found.

Shell

At the present time, because of an almost total lack of evidence, (the Bell-Philhower Site report lists one shell bead found by Mr. Charles A. Philhower in a pit of the historical period and worked fragments of conch) the writer is not prepared to discuss the possible incidence of shell artifacts in the prehistoric Minsi Culture. In common with Ritchie ("Bell-Philhower Site", p. 178) he refers the interested reader to the Heye-Pepper report, "Exploration of a Munsee Cemetery" for a description of numerous shell ornaments, etc., from the *historic* Minsi site adjacent to the Bell-Philhower component.

ROUGH STONE

172 Net sinkers are of two well-defined
324 types: flat pebbles with two opposed
227 notches, and sinkers made of thin sheets of stone chipped into circular or rectangular shape with two opposed notches. These 'trimmed sinkers' may have notches formed by chipping, or rarely, by grinding. (Plate 5, No. 3, shows notched flat pebble; Plate 5, No. 1, shows trimmed sinker with chipped notches; No. 3 of the same plate is a trimmed ground-notch sinker.)

Sinkers of both types may range in size from an inch to six or seven inches in

[P. 15, C]

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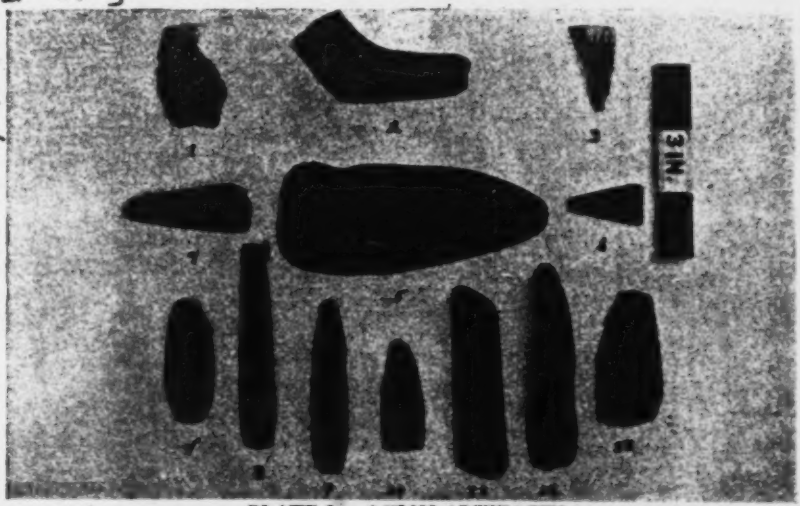

PLATE I. MINSI ARTIFACTS

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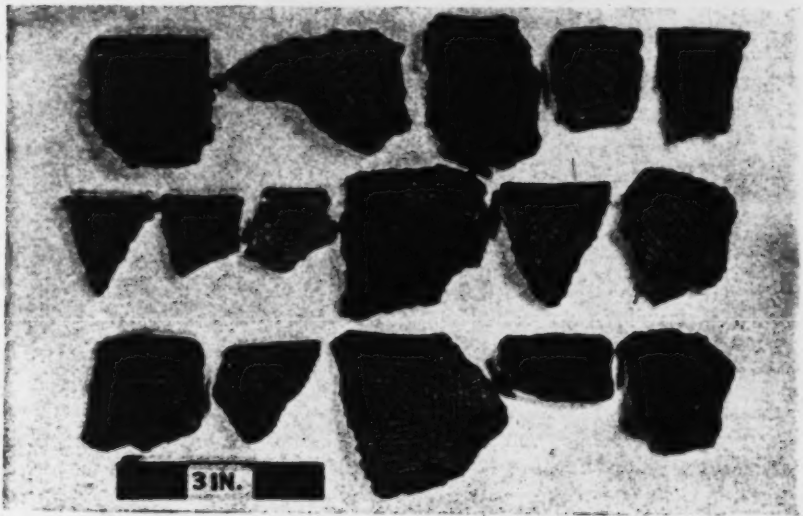

PLATE II. MINSI ARTIFACTS

[P 16]

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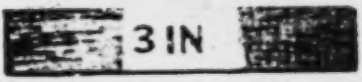

PLATE III. MINSI ARTIFACT

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3 IN. 3 IN.

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PLATE IV. MINSI ARTIFACT